

Application No. 10/531,627

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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A heat-sensitive lithographic printing plate precursor comprising a support having a hydrophilic surface and an oleophilic coating provided on the hydrophilic surface, said coating comprising

an infrared light absorbing agent, and

a polymer which comprises a phenolic monomeric unit, wherein the phenyl group of the phenolic monomeric unit is substituted by a group having the structure -N=N-Q, wherein the -N=N- group is covalently bound to a carbon atom of the phenyl group, and wherein Q is an aromatic group.

2. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein Q is a group comprising at least one heteroatom.

3. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein said heteroatom is a nitrogen, an oxygen or a sulfur atom.

4. (Currently Amended) The lithographic printing plate precursor according to claim 1 wherein Q has the structure -A-(T)_n,

wherein A is a mono-cyclic 5- or 6-membered aromatic group or a 5- or 6-membered aromatic ring annelated with another ring system,

wherein n is an integer selected between 0 and the maximum available positions on the aromatic group A,

wherein each T group is selected from -SO₂-NH-R¹, -NH-SO₂-R⁴, -CO-NR¹-R², -NR¹-CO-R⁴, -NR¹-CO-NR²-R³, -NR¹-CS-NR²-R³, -NR¹-CO-O-R¹, -O-CO-NR¹-R², -O-CO-R⁴, -CO-O-R⁴, -CO-R³, -SO₃-R¹, -O-SO₂-R⁴, -SO₂-R¹, -SO-R⁴, -P(=O)(-O-R¹)(-O-R²), -O-P(=O)(-O-R¹)(-O-R²), -NR¹-R², -O-R², -S-R², -N=N-R⁴, -CN, -NO₂, a halogenide and -M-R¹, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

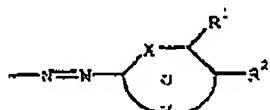
wherein R¹, R² and R³ are each independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

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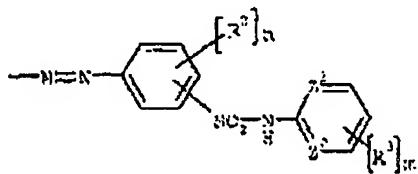
wherein R⁴ and R⁵ are selected from optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl and heteroaralkyl groups,
or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

5. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



wherein X is CR³, NR⁴ or N,
wherein Y denotes the necessary atoms to form a 5- or 6-membered aromatic ring, said atoms being selected from the group consisting of CR³, NR⁴, N, S and O,
wherein each R¹, R² and R³ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R⁵, -NH-SO₂-R⁷, -CO-NR⁵-R⁶, -NR⁵-CO-R⁷, -O-CO-R⁷, -CO-O-R⁵, -CO-R⁵, -SO₃-R⁵, -SO₂-R⁵, -SO-R⁷, -P(=O)(-O-R⁵)(-O-R⁶), -NR⁵-R⁶, -O-R⁵, -S-R⁵, -CN, -NO₂, halogen and -M-R⁵, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,
wherein R⁴, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁷ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁷ together represent the necessary atoms to form a cyclic structure.

6. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula

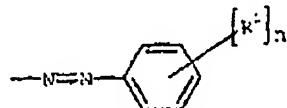


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wherein Z¹ and Z² are independently selected from CR¹ and N, wherein R¹ is selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 wherein n is 0, 1, 2, 3 or 4,
 wherein m is 0, 1, 2 or 3,
 wherein R² and R³ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R⁴, -NH-SO₂-R⁶, -CO-NR⁴-R⁵, -NR⁴-CO-R⁶, -O-CO-R⁶, -CO-O-R⁴, -CO-R⁴, -SO₃-R⁴, -SO₂-R⁴, -SO₂-R⁶, -P(=O)(-O-R⁴)(-O-R⁵), -NR⁴-R⁵, -O-R⁴, -S-R⁴, -CN, -NO₂, halogen and -M-R⁴, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,
 wherein R⁴ and R⁵ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁶ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.
 or wherein at least two groups selected from each R¹ to R⁶ together represent the necessary atoms to form a cyclic structure.

7. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2, 3, 4, or 5,

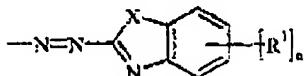
wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO²-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R² and R³ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

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wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure.

8. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2, 3 or 4,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R²,

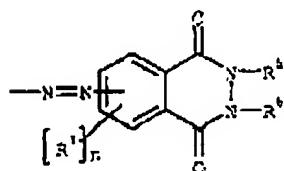
wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein X is O, S or NR⁵,

wherein R², R³ and R⁵ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

9. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



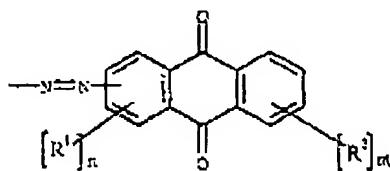
wherein n is 0, 1, 2 or 3,

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wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R², R³, R⁴ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure, or wherein R⁵ and R⁶ together represent the necessary atoms to form a cyclic structure.

10. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2 or 3,

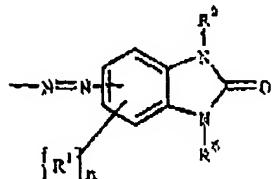
wherein m is 0, 1, 2, 3 or 4, wherein each R¹ and R² are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R³, -NH-SO₂-R⁵, -CO-NR³-R⁴, -NR³-CO-R⁵, -O-CO-R⁵, -CO-O-R³, -CO-R³, -SO₃-R³, -SO₂-R³, -SO-R⁵, -P(=O)(-O-R³)(-O-R⁴), -NR³-R⁴, -O-R³, -S-R³, -CN, -NO₂, a halogen and -M-R³, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R³ and R⁴ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁵ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

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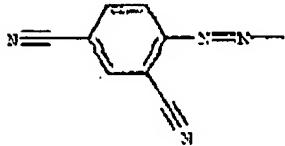
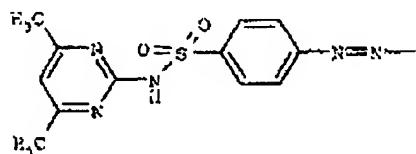
11. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2 or 3,

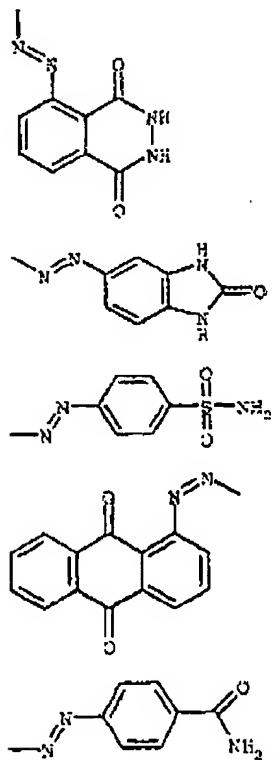
wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R², R³, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁶ together represent the necessary atoms to form a cyclic structure.

12. (Previously Presented) The lithographic printing plate precursor according to claim 1 wherein the -N=N-Q group comprises one of the following formulae:



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13. (Previously Presented) The lithographic printing plate precursor according to claim 1, wherein said polymer comprising a phenolic monomeric unit is a novolac, resol or polyvinylphenol.

14. (Previously Presented) The lithographic printing plate precursor according to claim 1, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

15. (Previously Presented) The lithographic printing plate precursor according to claim 14, wherein said dissolution inhibitor is selected from the group consisting of an organic compound which comprises at least one aromatic group and a hydrogen bonding site, a polymer or surfactant comprising siloxane or perfluoroalkyl units, and mixtures thereof.

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16. (Canceled)

17. (Previously Presented) The lithographic printing plate precursor according to claim 1, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

18. (Canceled)

19. (Currently Amended) The lithographic printing plate precursor according to claim 2 wherein Q has the structure -A- (T)_n,

wherein A is a mono-cyclic 5- or 6-membered aromatic group or a 5- or 6-membered aromatic ring annelated with another ring system,

wherein n is an integer selected between 0 and the maximum available positions on the aromatic group A,

wherein each T group is selected from -SO₂-NH-R¹, -NH-SO₂-R⁴, -CO-NR¹-R²,

-NR¹-CO-R⁴, -NR¹-CO-NR²-R³, -NR¹-CS-NR²-R³, -NR¹-CO-O-R¹, -O-CO-NR¹-R²,

-O-CO-R⁴, -CO-O-R⁴, -CO-R⁴, -SO₃-R¹, -O-SO₂-R⁴, -SO₂-R¹, -SO-R⁴,

-P(=O)(-O-R¹)(-O-R²), -O-P(=O)(-O-R¹)(-O-R²), -NR¹-R², -O-R², -S-R², -N=N-R⁴,

-CN, -NO₂, a halogenide and -M-R¹, wherein M represents a divalent linking group

containing 1 to 8 carbon atoms,

wherein R¹, R² and R³ are each independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ and R⁵ are selected from an optionally substituted alkyl, alkenyl, alkynyl,

cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

20. (Currently Amended) The lithographic printing plate precursor according to claim 3 wherein Q has the structure -A- (T)_n

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wherein A is a mono-cyclic 5- or 6-membered aromatic group or a 5- or 6-membered aromatic ring annelated with another ring system,

wherein n is an integer selected between 0 and the maximum available positions on the aromatic group A,

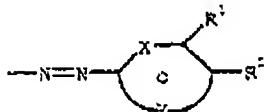
wherein each T group is selected from $\text{-SO}_2\text{-NH-R}^1$, $\text{-NH-SO}_2\text{-R}^4$, $\text{-CO-NR}^1\text{-R}^2$, $\text{-NR}^1\text{-CO-R}^4$, $\text{-NR}^1\text{-CO-NR}^2\text{-R}^3$, $\text{-NR}^1\text{-CS-NR}^2\text{-R}^3$, $\text{-NR}^1\text{-CO-O-R}^1$, $\text{-O-CO-NR}^1\text{-R}^2$, -O-CO-R^4 , -CO-O-R^4 , $\text{-SO}_3\text{-R}^1$, $\text{-O-SO}_2\text{-R}^1$, $\text{-SO}_2\text{-R}^4$, -SO-R^4 , $\text{-P(=O)(-O-R}^1\text{)(-O-R}^2\text{)}$, $\text{-O-P(=O)(-O-R}^1\text{)(-O-R}^2\text{)}$, $\text{-NR}^1\text{-R}^2$, -O-R^2 , -S-R^2 , -N=N-R^4 , -CN , -NO_2 , a halogenide and -M-R^1 , wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein R^1 , R^2 and R^3 are each independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R^4 and R^5 are selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

or wherein at least two groups selected from each R^1 to R^5 together represent the necessary atoms to form a cyclic structure.

21. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises the following formula



wherein X is CR^3 , NR^4 or N,

wherein Y denotes the necessary atoms to form a 5- or 6-membered aromatic ring, said atoms being selected from the group consisting of CR^3 , NR^4 , N, S and O,

wherein each R^1 , R^2 and R^3 is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, $\text{-SO}_2\text{-NH-R}^5$, $\text{-NH-SO}_2\text{-R}^7$, $\text{-CO-NR}^5\text{-R}^6$, $\text{-NR}^5\text{-CO-R}^7$, -O-CO-R^7 , -CO-O-R^5 , -CO-R^5 , $\text{-SO}_3\text{-R}^5$, $\text{-SO}_2\text{-R}^5$, -SO-R^7 , $\text{-P(=O)(-O-R}^5\text{)(-O-R}^6\text{)}$, $\text{-NR}^5\text{-R}^6$, -O-R^5 , -S-R^5 , -CN , -NO_2 , halogen and -M-R^5 , wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

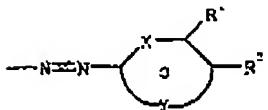
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wherein R⁴, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁷ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁷ together represent the necessary atoms to form a cyclic structure.

22. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



wherein X is CR³, NR⁴ or N,

wherein Y denotes the necessary atoms to form a 5- or 6-membered aromatic ring, said atoms being selected from the group consisting of CR³, NR⁴, N, S and O,

wherein each R¹, R² and R³ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R⁵, -NH-SO₂-R⁷, -CO-NR⁵-R⁶, -NR⁵-CO-R⁷, -O-CO-R⁷, -CO-O-R⁵, -CO-R⁵, -SO₂-R⁵, -SO₂-R⁵, -SO-R⁷, -P(=O)(-O-R⁵)(-O-R⁶), -NR⁵-R⁶, -O-R⁵, -S-R⁵, -CN, -NO₂, halogen and -M-R⁵, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

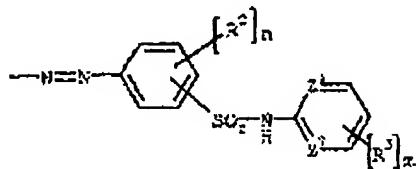
wherein R⁴, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁷ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁷ together represent the necessary atoms to form a cyclic structure.

23. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises the following formula

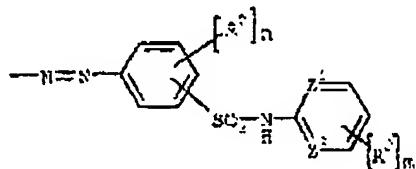
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wherein Z^1 and Z^2 are independently selected from CR¹ or N,
 wherein R¹ is selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 wherein n is 0, 1, 2, 3 or 4,
 wherein m is 0, 1, 2 or 3,
 wherein R² and R³ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R⁴, -NH-SO₂-R⁶, -CO-NR⁴-R⁵, -NR⁴-CO-R⁶, -O-CO-R⁶, -CO-O-R⁴, -CO-R⁴, -SO₃-R⁴, -SO₂-R⁴, -SO-R⁶, -P(=O)(-O-R⁴)(-O-R⁵), -NR⁴-R⁵, -O-R⁴, -S-R⁴, -CN, -NO₂, halogen, and -M-R⁴, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,
 wherein R⁴ and R⁵ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 wherein R⁶ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
 or wherein at least two groups selected from each R¹ to R⁶ together represent the necessary atoms to form a cyclic structure.

24. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



wherein Z^1 and Z^2 are independently selected from CR¹ and N,
 wherein R¹ is selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

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wherein n is 0, 1, 2, 3 or 4,

wherein m is 0, 1, 2 or 3,

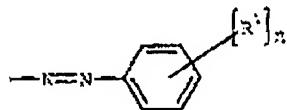
wherein R^2 and R^3 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, $-SO_2-NH-R^4$, $-NH-SO_2-R^6$, $-CO-NR^4-R^5$, $-NR^4-CO-R^6$, $-O-CO-R^6$, $-CO-O-R^4$, $-CO-R^4$, $-SO_3-R^4$, $-SO_2-R^4$, $-SO-R^6$, $-P(=O)(-O-R^4)(-O-R^5)$, $-NR^4-R^5$, $-O-R^4$, $-S-R^4$, $-CN$, $-NO_2$, halogen and $-M-R^4$, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein R^4 and R^5 are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R^6 is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

or wherein at least two groups selected from each R^1 to R^6 together represent the necessary atoms to form a cyclic structure.

25. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the $-N=N-Q$ group comprises the following formula



wherein n is 0, 1, 2, 3, 4, or 5,

wherein each R^1 is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, $-SO_2-NH-R^2$, $-NH-SO_2-R^4$, $-CO-NR^2-R^3$, $-NR^2-CO-R^4$, $-O-CO-R^4$, $-CO-O-R^2$, $-CO-R^2$, $-SO_3-R^2$, $-SO_2-R^2$, $-SO-R^4$, $-P(=O)(-O-R^2)(-O-R^3)$, $-NR^2-R^3$, $-O-R^2$, $-S-R^2$, $-CN$, $-NO_2$, a halogen and $-M-R^2$,

wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein R^2 and R^3 are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R^4 is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

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or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure.

26. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2, 3, 4, or 5,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R² and R³ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure.

27. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2, 3 or 4,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

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wherein X is O, S or NR⁵,

wherein R², R³ and R⁵ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

28. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2, 3 or 4,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R²,

wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein X is O, S or NR⁵,

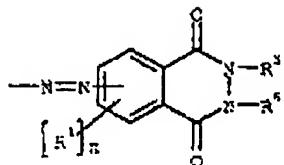
wherein R², R³ and R⁵ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

29. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises the following formula

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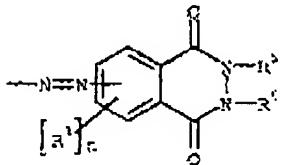


wherein n is 0, 1, 2 or 3,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R², R³, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure, or wherein R⁵ and R⁶ together represent the necessary atoms to form a cyclic structure.

30. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2 or 3,

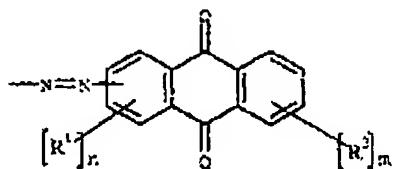
wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R², R³, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

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wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,
or wherein at least two groups selected from each R¹ to R⁴ together represent the necessary atoms to form a cyclic structure,
or wherein R⁵ and R⁶ together represent the necessary atoms to form a cyclic structure.

31. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises the following formula



wherein n is 0, 1, 2 or 3,

wherein m is 0, 1, 2, 3 or 4,

wherein each R¹ and R² are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R³, -NH-SO₂-R⁵, -CO-NR³-R⁴, -NR³-CO-R⁵, -O-CO-R⁵, -CO-O-R³, -CO-R³, -SO₃-R³, -SO₂-R³, -SO-R⁵, -P(=O)(-O-R³)(-O-R⁴), -NR³-R⁴, -O-R³, -S-R³, -CN, -NO₂, a halogen and -M-R³, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R³ and R⁴ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

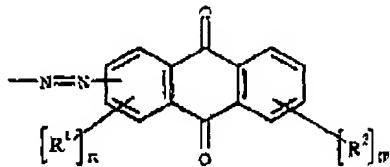
wherein R⁵ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

or wherein at least two groups selected from each R¹ to R⁵ together represent the necessary atoms to form a cyclic structure.

32. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula

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wherein n is 0, 1, 2 or 3,

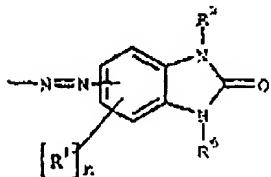
wherein m is 0, 1, 2, 3 or 4,

wherein each R^1 and R^2 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, $-SO_2-NH-R^3$, $-NH-SO_2-R^5$, $-CO-NR^3-R^4$, $-NR^3-CO-R^5$, $-O-CO-R^5$, $-CO-O-R^3$, $-CO-R^3$, $-SO_3-R^3$, $-SO_2-R^3$, $-SO-R^5$, $-P(=O)(-O-R^3)(-O-R^4)$, $-NR^3-R^4$, $-O-R^3$, $-S-R^3$, $-CN$, $-NO_2$, a halogen and $-M-R^3$, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R^3 and R^4 are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R^5 is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

or wherein at least two groups selected from each R^1 to R^5 together represent the necessary atoms to form a cyclic structure.

33. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the $-N=N-Q$ group comprises the following formula



wherein n is 0, 1, 2 or 3,

wherein each R^1 is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, $-SO_2-NH-R^2$, $-NH-SO_2-R^4$, $-CO-NR^2-R^3$, $-NR^2-CO-R^4$, $-O-CO-R^4$, $-CO-O-R^2$, $-CO-R^2$, $-SO_3-R^2$, $-SO_2-R^2$, $-SO-R^4$, $-P(=O)(-O-R^2)(-O-R^3)$, $-NR^2-R^3$, $-O-R^2$, $-S-R^2$, $-CN$, $-NO_2$, a halogen and $-M-R^2$, wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

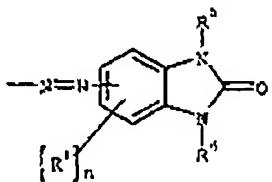
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wherein R², R³, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁶ together represent the necessary atoms to form a cyclic structure.

34. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises the following formula



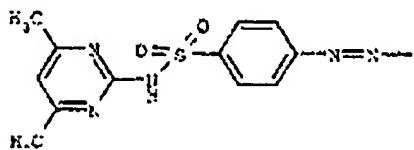
wherein n is 0, 1, 2 or 3,

wherein each R¹ is selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, -SO₂-NH-R², -NH-SO₂-R⁴, -CO-NR²-R³, -NR²-CO-R⁴, -O-CO-R⁴, -CO-O-R², -CO-R², -SO₃-R², -SO₂-R², -SO-R⁴, -P(=O)(-O-R²)(-O-R³), -NR²-R³, -O-R², -S-R², -CN, -NO₂, a halogen and -M-R², wherein M represents a divalent linking group containing 1 to 8 carbon atoms,

wherein R², R³, R⁵ and R⁶ are independently selected from hydrogen and an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

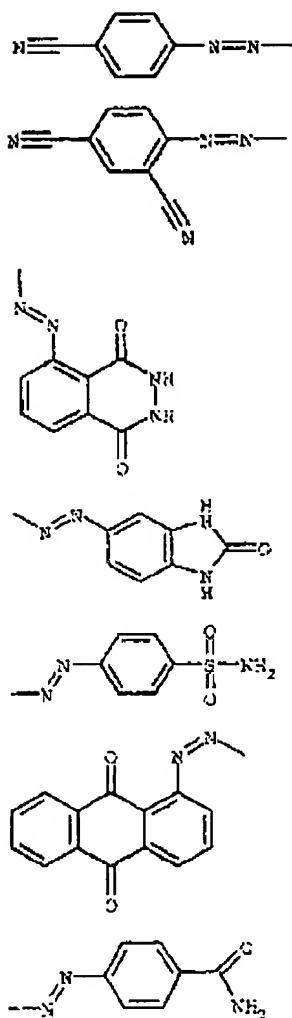
wherein R⁴ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein at least two groups selected from each R¹ to R⁶ together represent the necessary atoms to form a cyclic structure.

35. (Previously Presented) The lithographic printing plate precursor according to claim 2 wherein the -N=N-Q group comprises one of the following formulae:

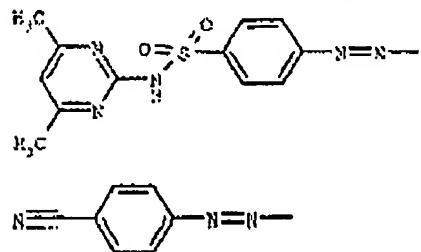


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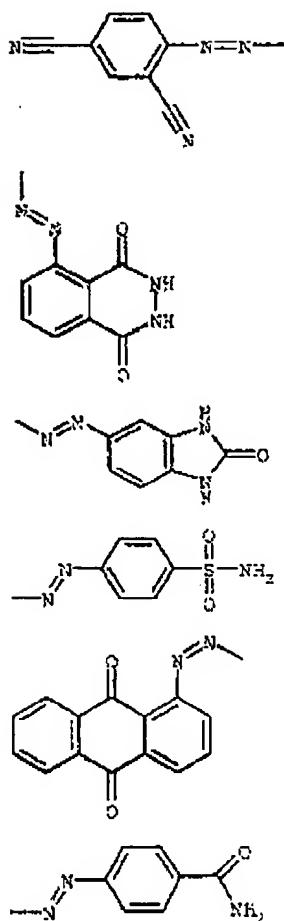


36. (Previously Presented) The lithographic printing plate precursor according to claim 3 wherein the -N=N-Q group comprises one of the following formulae:



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37. (Previously Presented) The lithographic printing plate precursor according to claim 2, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

38. (Previously Presented) The lithographic printing plate precursor according to claim 3, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

39. (Previously Presented) The lithographic printing plate precursor according to claim 4, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

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40. (Previously Presented) The lithographic printing plate precursor as amended in claim 5, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

41. (Previously Presented) The lithographic printing plate precursor according to claim 6, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

42. (Previously Presented) The lithographic printing plate precursor according to claim 7, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

43. (Previously Presented) The lithographic printing plate precursor according to claim 8, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

44. (Previously Presented) The lithographic printing plate precursor according to claim 9, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

45. (Previously Presented) The lithographic printing plate precursor according to claim 10, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

46. (Previously Presented) The lithographic printing plate precursor according to claim 11, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

47. (Previously Presented) The lithographic printing plate precursor according to claim 12, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

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48. (Previously Presented) The lithographic printing plate precursor according to claim 2, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

49. (Previously Presented) The lithographic printing plate precursor according to claim 3, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

50. (Previously Presented) The lithographic printing plate precursor according to claim 4, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

51. (Previously Presented) The lithographic printing plate precursor according to claim 5, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

52. (Previously Presented) The lithographic printing plate precursor according to claim 6, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

53. (Previously Presented) The lithographic printing plate precursor according to claim 7, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

54. (Previously Presented) The lithographic printing plate precursor according to claim 8, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

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55. (Previously Presented) The lithographic printing plate precursor according to claim 9, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

56. (Previously Presented) The lithographic printing plate precursor according to claim 10, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

57. (Previously Presented) The lithographic printing plate precursor according to claim 11, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

58. (Previously Presented) The lithographic printing plate precursor according to claim 12, wherein said coating further comprising a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

59. (Previously Presented) A method for increasing the chemical resistance of a coating of a positive working heat-sensitive lithographic printing plate precursor, the method comprising providing a coating comprising:

a polymer which comprises a phenolic monomeric unit wherein the phenyl group of the phenolic monomeric unit is substituted by a group having the structure -N=N-Q wherein the -N=N- group is covalently bound to a carbon atom of the phenyl group and wherein Q is an aromatic group,

an infrared absorbing agent, and
a dissolution inhibitor.

60. (Previously Presented) A method for increasing the chemical resistance of a coating of a negative working heat-sensitive lithographic printing plate, the method comprising providing a coating comprising:

a polymer which comprises a phenolic monomeric unit wherein the phenyl group of the phenolic monomeric unit is substituted by a group having the structure -N=N-Q wherein the -N=N- group is covalently bound to a carbon atom of the phenyl group and wherein Q is an aromatic group,

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a latent Brönsted acid, and
an acid-crosslinkable compound.

This listing of claims replaces all prior versions, and listings, of claims in the application.